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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,564	08/27/2003	Messay Amerga	020673	8247
23596 7590 05/29/2008 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121				
EXAMINER				
SAFAIPOUR, BOBBAK				
ART UNIT		PAPER NUMBER		
2618				
NOTIFICATION DATE		DELIVERY MODE		
05/29/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/650,564

Applicant(s)

AMERGA, MESSAY

Examiner

BOBBAK SAFAIPOUR

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-21 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/01/08 has been entered.

Response to Arguments

Applicant's arguments have been fully considered but they are not persuasive.

In the present application, Applicant essentially argues that Steudle fails teach a frequency controller for suppressing the generation of frequency switch commands when the frequency switch blocking signal is asserted, as claimed in the independent claims. Furthermore, Applicant argues that the presence of gaps as discloses in Steudle does not equate to or can be read as a frequency switch blocking signal.

The Examiner respectfully disagrees. Steudle discloses a connection frame number that defines the frame into whose time-slot(s) a gap (read as frequency switch blocking signal) is left for measuring inter-frequency parameters. A transmission gap (read as frequency switch blocking signal) starting slot number (TGSN) defines the time-slot of the 15 time-slots in the frame in question, from which the gap starts. Transmission gap length $1/2$ (TGL $1/2$) defines how long the gap is as a number of time-slots, in other words, it defines the length of time during which transmission is interrupted at one time (read as suppressing the generation of frequency

switch commands). In other words, the transmission is blocked due to the gap. Transmission gap distance (TGD) is the distance between two consecutive gaps indicated as a number of time-slots. Transmission gap pattern length $\{\text{fraction}(1/2)\}$ (TGPL1/2) defines the number of consecutive frames which comprise one or two gaps. Sequences of transmission gap pattern lengths are repeated until the required measurement has been made. The total time of measurement is defined as a transmission gap period repetition count (TGPRC), which is indicated as a number of frames and typically comprises several gap patterns. (figure 3; col. 3, lines 44 to 67)

The performance of the measurements is typically defined by means of the parameters TGL1/2, TGPL1/2, TGD and TGPRC. The parameters CFN and TGSN are used in some measurements to only define the delay to be used, which is typically a measurement pattern-specific constant value for all mobile stations. For inter-frequency handover of a WCDMA system, the fixed network UTRAN requests user equipment UE to perform inter-frequency parameter measurements. The fixed network UTRAN then signals to the user equipment UE monitoring settings for the handover and the compressed mode parameters to be used for the required measurements. (figure 3; col. 4, lines 1-20)

In the instant application, the specification discloses that frequency switching is disabled for the duration required to complete the desired intra-frequency search. This may be accomplished by blocking frequency switching for a pre-determined period. Alternatively, frequency switching is disabled until a searcher signals that the search is complete (paragraph 48 of the published application). As describe above, Steudle discloses an inter-frequency handover of a WCDMA system, wherein the fixed network UTRAN requests user equipment UE to

perform inter-frequency parameter measurements. The fixed network UTRAN then signals to the user equipment UE monitoring settings for the handover and the compressed mode (i.e.

Information normally transmitted in a 10-ms frame is transmitted in a shorter time. Since the same information is transmitted in a shorter time, a gap remains in the frame, during which measurements of the parameters can be performed) parameters to be used for the required measurements. (col. 6, lines 1-19)

It has been shown that a frequency switch blocking signal is taught in Steudle. If the Applicant intends to differentiate between the frequency switch blocking signal of the instant application and the transmission gaps of the reference, then such differences should be made explicit in the claims. As a result, the argued features are written such that they read upon the cited references; therefore, the previous rejection still applies.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Amerga et al** (hereinafter “Amerga”; US 2003/0231605) in view of **Steudle (US 6,810,019 B2)**.

Consider **claim 1**, Amerga discloses an apparatus, comprising: a search scheduler for scheduling a search and for generating a frequency switch blocking signal (abstract; figures 2, 4-9; paragraphs 36-39), but fails to disclose a frequency controller for generating frequency switch commands, receiving the frequency switch blocking signal, and suppressing the generation of frequency switch commands when the frequency switch blocking signal is asserted.

In related art, Steudle discloses a frequency controller for generating frequency switch commands, receiving the frequency switch blocking signal, and suppressing the generation of frequency switch commands when the frequency switch blocking signal is asserted. (figure 3; abstract; col. 5, lines 44 to col. 6, line 19; A gap is left for measuring inter-frequency parameters.)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Steudle into the teachings of Amerga by optimizing the distribution of the measurement gaps between various mobile stations, the interference caused by mobile stations to each other at a higher transmission is reduced.

Consider **claim 13**, Amerga discloses a first Integrated Circuit (IC), responsive to a frequency switch signal generated in a second IC, the second IC comprising: a search scheduler for scheduling a search and for generating a frequency switch blocking signal (abstract; figures 2, 4-9; paragraphs 36-39); and a first IC comprising: a frequency synthesizer to receive the

frequency switch signal from the second IC and to generate an output signal, the frequency of the output signal changing from a first frequency to a second frequency in response to the frequency switch signal (paragraphs 30-39).

Amerga fails to disclose a frequency controller for generating a frequency switch signal comprising frequency switch commands, receiving the frequency switch blocking signal, and suppressing the generation of frequency switch commands when the frequency switch blocking signal is asserted.

In related art, Steudle discloses a frequency controller for generating a frequency switch signal comprising frequency switch commands, receiving the frequency switch blocking signal, and suppressing the generation of frequency switch commands when the frequency switch blocking signal is asserted. (figure 3; abstract; col. 5, lines 44 to col. 6, line 19; A gap is left for measuring inter-frequency parameters.)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Steudle into the teachings of Amerga by optimizing the distribution of the measurement gaps between various mobile stations, the interference caused by mobile stations to each other at a higher transmission is reduced.

Consider **claim 14**, Amerga discloses a wireless communication device, comprising: a processor for scheduling a search (abstract; figures 2, 4-9; paragraphs 36-39), but fails to disclose generating a frequency switch blocking signal; generating frequency switch commands; and suppressing the generation of frequency switch commands when the frequency switch blocking signal is asserted.

In related art, Steudle discloses generating a frequency switch blocking signal; generating frequency switch commands; and suppressing the generation of frequency switch commands when the frequency switch blocking signal is asserted. (figure 3; abstract; col. 5, lines 44 to col. 6, line 19; A gap is left for measuring inter-frequency parameters.)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Steudle into the teachings of Amerga by optimizing the distribution of the measurement gaps between various mobile stations, the interference caused by mobile stations to each other at a higher transmission is reduced.

Consider **claim 17**, Amerga discloses a method of searching in the presence of frequency gaps, comprising: scheduling a search (abstract; figures 2, 4-9; paragraphs 36-39), but fails to disclose suppressing frequency switches during the scheduled search.

In related art, Steudle discloses suppressing frequency switches during the scheduled search (figure 3; abstract; col. 5, lines 44 to col. 6, line 19; A gap is left for measuring inter-frequency parameters.).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Steudle into the teachings of Amerga by optimizing the distribution of the measurement gaps between various mobile stations, the interference caused by mobile stations to each other at a higher transmission is reduced.

Consider **claim 20**, Amerga discloses an apparatus, comprising: means for scheduling a search (abstract; figures 2, 4-9; paragraphs 36-39), but fails to disclose means for suppressing frequency switches during the scheduled search.

In related art, Steudle discloses means for suppressing frequency switches during the scheduled search (figure 3; abstract; col. 5, lines 44 to col. 6, line 19; A gap is left for measuring inter-frequency parameters.).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Steudle into the teachings of Amerga by optimizing the distribution of the measurement gaps between various mobile stations, the interference caused by mobile stations to each other at a higher transmission is reduced.

Consider **claim 21**, Amerga discloses processor readable media encoded with software operable to perform the following steps: scheduling a search (abstract; figures 2, 4-9; paragraphs 36-39), but fails to disclose suppressing frequency switches during the scheduled search.

In related art, Steudle discloses suppressing frequency switches during the scheduled search (figure 3; abstract; col. 5, lines 44 to col. 6, line 19; A gap is left for measuring inter-frequency parameters.).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Steudle into the teachings of Amerga by optimizing the distribution of the measurement gaps between various mobile stations, the interference caused by mobile stations to each other at a higher transmission is reduced.

Consider **claim 2**, and **as applied to claim 1 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein a gap manager for indicating when a frequency switch is to occur, and wherein the search scheduler schedules the search during a period of time without a frequency switch as indicated by the gap manager. (Steudle: figure 3; abstract; col. 5, lines 44 to col. 6, line 19)

Consider **claim 3**, and **as applied to claim 1 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the search scheduler comprises a timer, the expiration of which indicates a search is to be scheduled. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 4**, and **as applied to claim 3 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the search scheduler schedules a search without asserting the frequency switch blocking signal prior to the timer expiration. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 5**, and **as applied to claim 3 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the timer resets upon the completion of a scheduled search. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39; performing searches at new frequencies)

Consider **claim 6**, and **as applied to claim 3 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the search scheduler schedules a search and asserts the

frequency switch blocking signal subsequent to the timer expiration. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 7**, and **as applied to claim 1 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the search scheduler asserts the frequency switch blocking signal during the scheduled search. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 8**, and **as applied to claim 2 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the search scheduler schedules a plurality of search types. (abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 9**, and **as applied to claim 81 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the search scheduler schedules one or more of the plurality of search types (Amerga: abstract; figures 2, 4-9; paragraphs 36-39) in response to the frequency switch indicator received from the gap manager. (Steudle: figure 3; abstract; col. 5, lines 44 to col. 6, line 19)

Consider **claim 10**, and **as applied to claim 8 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the search scheduler comprises a plurality of timers corresponding to one or more of the plurality of search types, the expiration of each timer indicating a search of the respective search type is to be scheduled. (abstract; figures 2, 4-9;

paragraphs 36-39)

Consider **claim 11**, and **as applied to claim 10 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the search scheduler schedules a search corresponding to one of the plurality of search types and asserts the frequency switch blocking signal subsequent to the respective timer expiration. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 12**, and **as applied to claim 8 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the plurality of search types comprises one or more of a list search, a W-CDMA step one search, or a W-CDMA step two search (Amerga: abstract)

Consider **claim 15**, and **as applied to claim 14 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein frequency synthesizer to receive the frequency switch commands and to generate an output signal, the frequency of the output signal changing from a first frequency to a second frequency in response to the frequency switch commands. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 16**, and **as applied to claim 14 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein a searcher for searching in accordance with the scheduled search and for indicating to the search scheduler when the scheduled search is complete. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 18**, and **as applied to claim 17 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein determining future frequency switches; and wherein the search is scheduled during a time period in which no future frequency switches are determined. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 19**, and **as applied to claim 18 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein timing the duration between searches; and scheduling searches without suppressing frequency switches prior to the timed duration reaching a pre-determined maximum. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Conclusion

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Bobbak Safaipoor whose telephone number is (571) 270-1092. The Examiner can normally be reached on Monday-Friday from 9:00am to 5:00pm.

Art Unit: 2618

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Matthew Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Bobbak Safaipoor
B.S./bs

May 19, 2008

/Matthew D. Anderson/

Supervisory Patent Examiner, Art Unit 2618